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SEQUENCE LISTING

<110> WACHI, Masaaki
NAGAI, Kazuo

<120> A Gene Coding for Penicillin Binding Protein
and a Method for Producing L-Glutamic Acid

<130> OP843-PCT

<141> 1999-03-05

<150> JP 10-55608

<151> 1998-03-06

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 Val Gly Glu Gln Ala Ile Ala Ala Ile Gly Leu Asp Ser Ser Ser Leu
 65 70 75 80
 Pro Thr Ser Asp Ala Ile Phe Ala Ala Val Pro Gly Thr Arg Thr His
 85 90 95
 Gly Ala Gln Phe Ala Gly Thr Asp Asn Ala Ala Lys Ala Val Ala Ile
 100 105 110

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Leu Thr Asp Ala Ala Gly Leu Glu Val Leu Asn Glu Ala Gly Glu Thr
 115 120 125
 Arg Pro Ile Ile Val Val Asp Asp Val Arg Ala Val Leu Gly Ala Ala
 130 135 140
 Ser Ser Ser Ile Tyr Gly Asp Pro Ser Lys Asp Phe Thr Leu Ile Gly
 145 150 155 160
 Val Thr Gly Thr Ser Gly Lys Thr Thr Thr Ser Tyr Leu Leu Glu Lys
 165 170 175
 Gly Leu Met Glu Ala Gly His Lys Val Gly Leu Ile Gly Thr Thr Gly
 180 185 190
 Thr Arg Ile Asp Gly Glu Glu Val Pro Thr Lys Leu Thr Thr Pro Glu
 195 200 205
 Ala Pro Thr Leu Gln Ala Leu Phe Ala Arg Met Arg Asp His Gly Val
 210 215 220
 Thr His Val Val Met Glu Val Ser Ser His Ala Leu Ser Leu Gly Arg
 225 230 235 240
 Val Ala Gly Ser His Phe Asp Val Ala Ala Phe Thr Asn Leu Ser Gln
 245 250 255
 Asp His Leu Asp Phe His Pro Thr Met Asp Asp Tyr Phe Asp Ala Lys
 260 265 270
 Ala Leu Phe Phe Arg Ala Asp Ser Pro Leu Val Ala Asp Lys Gln Val
 275 280 285
 Val Cys Val Asp Asp Ser Trp Gly Gln Arg Met Ala Ser Val Ala Ala
 290 295 300
 Asp Val Gln Thr Val Ser Thr Leu Gly Gln Glu Ala Asp Phe Ser Ala
 305 310 315 320
 Thr Asp Ile Asn Val Ser Asp Ser Gly Ala Gln Ser Phe Lys Ile Asn
 325 330 335
 Ala Pro Ser Asn Gln Ser Tyr Gln Val Glu Leu Ala Leu Pro Gly Ala
 340 345 350
 Phe Asn Val Ala Asn Ala Thr Leu Ala Phe Ala Ala Ala Pro Trp
 355 360 365
 Val Leu Met Ala Thr Phe Ala Arg Gly Met Ser Lys Val Ala Val Pro
 370 375 380
 Gly Arg Met Glu Arg Ile Asp Glu Gly Gln Asp Phe Leu Ala Val Val
 385 390 395 400
 Asp Tyr Ala His Lys Pro Ala Ala Val Ala Ala Val Leu Asp Thr Leu
 405 410 415
 Arg Thr Gln Ile Asp Gly Arg Leu Gly Ser Gly Tyr Arg Cys Trp Trp

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420

425

430

Arg Arg Asp Ser Thr Lys Arg Gly Pro Met Gly Ser Cys Pro His Arg
 435 440 445
 Ser Gly Ser Ser Tyr Cys Thr Asp Ala Asn Leu Val Arg Val Ala Gly
 450 455 460
 Thr Ile Arg Ala Ala Val Thr Ala Gly Ala Gln Gln Gly Ala Ser Glu
 465 470 475 480
 Ser Glu Arg Pro Val Glu Val Leu Glu Ile Gly Asp Arg Ala Glu Ala
 485 490 495
 Ile Arg Val Leu Val Glu Trp Ala Gln Pro Gly Asp Gly Ile Val Val
 500 505 510
 Ala Gly Lys Gly His Glu Val Gly Gln Leu Val Ala Gly Val Thr His
 515 520 525
 His Phe Asp Asp Arg Glu Glu Gly Arg Ala Ala Leu Thr Glu Lys Leu
 530 535 540
 Asn Asn Lys Leu Pro Leu Thr Thr Glu Glu Gly
 545 550 555

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 <211> 293
 <212> PRT
 <213> Brevibacterium lactofermentum

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 Met Ile Thr Met Thr Leu Gly Glu Ile Ala Asp Ile Val Gly Gly Arg
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 Leu Thr Gly Gly Ala Gln Glu Asp Thr Leu Val Ser Ser Ser Val Glu
 20 25 30
 Phe Asp Ser Arg Ser Leu Thr Pro Gly Gly Leu Phe Leu Ala Leu Pro
 35 40 45
 Gly Ala Arg Val Asp Gly His Asp Phe Ala Ala Thr Ala Ile Glu Lys
 50 55 60
 Gly Ala Val Ala Val Leu Ala Ala Arg Glu Val Asp Val Pro Ala Ile
 65 70 75 80
 Val Val Pro Pro Val Lys Ile Gln Glu Ser Asn Ala Asp Ile Tyr Ala
 85 90 95
 His Glu Pro Asp Gly His Gly Ala Ala Val Val Glu Ala Leu Ser Arg
 100 105 110
 Leu Ala Arg His Val Val Asp Ile Cys Val Ala Gly His Gln Leu Asn
 115 120 125
 Val Val Ala Ile Thr Gly Ser Ala Gly Lys Thr Ser Thr Lys Asp Phe

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130 135 140
 Ile Ala Thr Val Leu Gly Gln Asp Gly Pro Thr Val Ala Pro Pro Gly
 145 150 155 160
 Ser Phe Asn Asn Glu Leu Gly Leu Pro His Thr Val Arg Cys Thr Thr
 165 170 175
 Asp Thr Lys Tyr Leu Val Ala Glu Met Ser Ala Arg Gly Ile Gly His
 180 185 190
 Ile Lys His Leu Thr Glu Ile Arg Pro Pro Arg Ile Ala Ala Val Leu
 195 200 205
 Asn Val Gly His Ala His Leu Gly Glu Phe Gly Ser Arg Glu Asn Ile
 210 215 220
 Ala Gln Ala Lys Gly Glu Ile Ile Glu Ala Leu Pro Ser Lys Lys Thr
 225 230 235 240
 Gly Gly Val Ala Val Leu Asn Ala Asp Asp Pro Phe Val Ala Arg Met
 245 250 255
 Ala Pro Arg Thr Lys Ala Arg Val Val Trp Phe Thr Thr Asp Ala Gly
 260 265 270
 Gln Ala Lys Lys Ser Asp Tyr Trp Ala Thr Ser Ile Ser Leu Asp Ala
 275 280 285
 Val Ala Arg Ala Ser
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 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:primer

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 gcgcgaattc cgcaacctcg tcgtgacatg

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<210> 6
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:primer

<400> 6
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34

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